Application of Bijan Treister et al., Ser. No. 10/052,019, Filed 01/16/2002
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CLAIM AMENDMENTS

1	1.	(Currently Amended) A method for managing a communications arrangement
2		comprising a plurality of participants, the method comprising the
3		computer-implemented steps of:
4		assigning, to a first participant from the plurality of participants, one or more
5		functions to be performed by the first participant;
6		prior to a failure of the first participant that prevents the first participant from
7		performing any of the one or more functions to be performed by the first
8		participant,
9		designating a second participant from the plurality of participants to
10		perform the one or more functions if any of one or more handoff
11		criteria are satisfied;
12		the first participant communicating with the second participant to indicate
13		that the second participant has been designated to perform the one
14		or more functions if any of the one or more handoff criteria are
15		satisfied;
16		in response to any of the one or more handoff criteria being satisfied, assigning
17		the one or more functions to the second participant; and
18		selecting, based upon performance of a plurality of communications channels and
19		at least one performance criterion, a first communications channel from
20		the a plurality of communications channels.

1	2.	(Currently Amended) The method of Claim 1, further comprising the computer-
2		implemented steps of:
3		generating channel identification data that identifies the first communications
4		channel; and
5		providing the channel identification data over the first communications channel to
6		one or more participants from the plurality of participants; and

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7   receiving at least a first communication from the one or more participants over a

8   second communications channel from the plurality of communications

9   channels, wherein the second communications channel is determined

10   based on the channel identification data.

1   3.   (Cancelled)

1   4.   (Currently Amended) A method for managing, based on performance, a

2   communications arrangement comprising a plurality of participants, the method

3   comprising the computer-implemented steps of:

4   selecting, based upon performance of a plurality of communications channels, a

5   first communications channel from the plurality of communications

6   channels;

7   generating channel identification data that identifies the first communications

8   channel;

9   providing the channel identification data to one or more participants from the

10   plurality of participants;

11   receiving at least a first communication from the one or more participants over a

12   second the first communications channel from the plurality of

13   communications channels, wherein the second first communications

14   channel is determined based on the channel identification data;

15   assigning, to a first participant from the plurality of participants, one or more

16   functions to be performed by the first participant;

17   prior to a failure of the first participant, designating a second participant from the

18   plurality of participants to perform the one or more functions if any of one

19   or more handoff criteria are satisfied; and

20   wherein the plurality of communications channels correspond to a set of

21   frequencies and the first communication received from the one or more

22   participants is based on a hopping sequence among at least two

23   communications channels of the plurality of communications channels,

24   according to a frequency hopping protocol.

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25 5.   (Currently Amended) A method for assigning functions between participants and

26   selecting communications channels in a communications arrangement comprising

27   a plurality of participants, the method comprising the computer-implemented

28   steps of:

29   assigning, to a first participant from the plurality of participants, one or more

30   functions to be performed by the first participant;

31   prior to a failure of the first participant that prevents the first participant from

32   performing any of the one or more functions to be performed by the first

33   participant,

34   designating a second participant from the plurality of participants to

35   perform the one or more functions if any of one or more criteria are

36   satisfied;

37   the first participant communicating with the second participant to indicate

38   that the second participant has been designated to perform the one

39   or more functions if any of the one or more handoff criteria are

40   satisfied;

41   in response to any of the one or more criteria being satisfied, assigning the one or

42   more functions to the second participant;

43   selecting, based upon performance of a plurality of communications channels and

44   at least one specified criterion, a first communications channel from the

45   plurality of communications channels;

46   generating channel identification data that identifies the first communications

47   channel;

48   providing the channel identification data to one or more participants from the

49   plurality of participants; and

50   receiving at least a first communication from the one or more participants over a

51   second communications channel from the plurality of communications

52   channels, wherein the second communications channel is determined

53   based on the channel identification data that identifies the first

54   communications channel; and

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55   wherein the plurality of communications channels correspond to a set of

56   frequencies and the first communication received from the one or more

57   participants is based on a hopping sequence among at least two

58   communications channels of the plurality of communications channels,

59   according to a frequency hopping protocol.

1   6.   (Currently Amended) The method ~~as recited in~~ of Claim 5, wherein:

2   communications between the plurality of participants are made ~~on different~~

3   ~~frequencies over time~~ using a frequency hopping sequence according to a

4   frequency hopping protocol;

5   the communications arrangement includes a wireless communications

6   arrangement; and

7   the plurality of participants includes a plurality of mobile devices.

1   7.   (Cancelled)

1   8.   (Currently Amended) The method of Claim 5, wherein the channel identification

2   data is first channel identification data, and wherein the method further comprises

3   the computer-implemented steps of:

4   selecting, based upon the performance of the plurality of communications

5   channels and the at least one specified criterion, a third communications

6   channel from the plurality of communications channels;

7   generating second channel identification data that identifies the third

8   communications channel;

9   providing the second channel identification data over a particular communications

10   channel of the plurality of communications channels to one or more

11   additional participants from the plurality of participants, wherein the

12   particular communications channel is not the third communications

13   channel; and

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14   receiving at least a second communication from the one or more additional

15   participants over a fourth communications channel from the plurality of

16   communications channels, wherein the fourth communications channel is

17   determined based on the second channel identification data that identifies

18   the third communications channel.

1   9.   (Currently Amended) The method of Claim 5, wherein the <u>computer-</u>

2   <u>implemented</u> step of providing the channel identification data to the one or more

3   participants <u>further</u> comprises the computer-implemented step<u>s</u> of:

4   providing the channel identification data to the one or more participants over a

5   third communications channel of the plurality of communications

6   channels, wherein the third communications channel is not the first

7   communications channel<u>;</u>

8   <u>determining the performance of the plurality of communications channels used by</u>

9   <u>the plurality of participants; and</u>

10   <u>wherein at least the first communication from the one or more participants</u>

11   <u>includes data that indicates the performance of the third communications</u>

12   <u>channel.</u>

1   10.   (Currently Amended) The method of Claim 9, wherein<u>:</u> at least the first

2   communication from the one or more participants includes data that indicates the

3   performance of the third communications channel

4   the performance of the plurality of communications channels is determined based

5   on a channel performance testing technique selected from the group

6   consisting of a received signal strength indicator, a header error check, a

7   cyclic redundancy check, and forward error correction<u>;</u>

8   <u>the first communications device is a master participant;</u>

9   <u>the second communications device is an associate master participant; and</u>

10   <u>the one or more communications devices are slave participants.</u>

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1   11.   (Currently Amended) The method of Claim 5, wherein the <u>computer-implemented</u>

2   step of selecting the first communications channel from the plurality of

3   communications channels <u>further</u> comprises the computer-implemented steps of:

4   classifying one or more communications channels of the plurality of

5   communications channels based upon whether the performance of the one

6   or more communications channels satisfies at least one performance

7   criterion; ~~and~~

8   selecting the first communications channel from the one or more communications

9   channels that are classified as satisfying the at least one performance

10   criterion<u>; and</u>

11   <u>the method further comprises the computer-implemented steps of:</u>

12   <u>determining a number of communications channels of the plurality of</u>

13   <u>communications channels that satisfy the at least one performance</u>

14   <u>criterion; and</u>

15   <u>if the number of communications channels that satisfy the at least one</u>

16   <u>performance criterion is less than a specified number, reclassifying one or</u>

17   <u>more communications channels of the plurality of communications</u>

18   <u>channels.</u>

1   12.   (Cancelled)

1   13.   (Currently Amended) The method of Claim 5, further comprising the

2   computer-implemented step<u>s</u> of:

3   determining the performance of the plurality of communications channels <u>by</u>

4   <u>performing the computer-implemented steps of:</u>

5   <u>sending a request for performance data to at least one participant of the</u>

6   <u>plurality of participants;</u>

7   <u>in response to the request, receiving performance data from the at least one</u>

8   <u>participant; and</u>

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9   creating and maintaining performance data that indicates the performance

10   of one or more communications channels of the plurality of

11   communications channels for communications with one or more

12   participants from the plurality of participants.

1   14.   (Cancelled)

1   15.   (Cancelled)

1   16.   (Cancelled)

1   17.   (Currently Amended) The method ~~as recited in~~ of Claim 5, wherein:

2   the one or more criteria include the failure of the first participant;

3   the first participant is a master participant that performs the steps of selecting,

4   generating, providing, and receiving,

5   the second participant is a slave participant prior to being assigned to perform the

6   one or more functions,

7   the second participant is an associate master participant after being designated to

8   perform the one or more functions if any of the one or more criteria are

9   satisfied, and

10   the one or more participants include one or more slave participants.

1   18.   (Cancelled)

1   19.   (Currently Amended) The method of Claim 5, wherein:

2   the one or more participants includes the second participant; and

3   the second participant is designated by at least one other participant that is

4   selected from the group comprising (a) the first participant, (b) the first

5   participant and at least one other participant from the plurality of

6   participants, and (c) one or more participants from the plurality of

7   participants but not including the first participant.

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1   20.   (Cancelled)

1   21.   (Cancelled)

1   22.   (Currently Amended) A method for managing a communications system

2   comprising a plurality of participants, comprising the computer-implemented

3   steps of:

4   determining the performance of a first communications channel of a plurality of

5   communications channels between a first participant from the plurality of

6   participants and one or more other participants from the plurality of

7   participants; and

8   selecting, based upon the performance of the first communications channel

9   between the first participant and the one or more other participants, a

10   second participant from the one or more other participants;

11   sending at least a first communication from the second participant over the first

12   communications channel;

13   assigning, to a third participant from the plurality of participants, one or more

14   functions to be performed by the third participant; and

15   designating a fourth participant from the plurality of participants to perform the one or

16   more functions if any of one or more handoff criteria are satisfied; and

17   wherein the plurality of communications channels correspond to a set of

18   frequencies and the first communication received from the first participant

19   is based on a hopping sequence among at least two communications

20   channels of the plurality of communications channels, according to a

21   frequency hopping protocol.

1   23.   (Currently Amended) The method of Claim 22, further comprising the computer-

2   implemented step of:

3   in response to any of the one or more handoff criteria being satisfied, assigning

4   the one or more functions to the fourth participant;

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5   wherein the one or more participants includes the fourth participant; and

6   wherein the first participant is the same participant as the third participant.

1   24.   (Currently Amended) The method of Claim 22, wherein the computer-

2   implemented step of designating the fourth participant is performed prior to a

3   condition of the third participant that prevents the third participant from

4   performing the one or more functions.

1   25.   (Currently Amended) The method of Claim 22, wherein the computer-

2   implemented step of designating the fourth participant is performed prior to a

3   failure of the third participant.

1   26.   (Cancelled)

1   27.   (Cancelled)

1   28.   (Currently Amended) A first communications device comprising:

2   an interface that is configured to receive data from a plurality of communications

3   devices and to transmit data to the plurality of communications devices;

4   and

5   a mechanism that is communicatively coupled to the interface and configured to:

6   perform one or more functions;

7   prior to a failure of the communications device that prevents the

8   communications device from performing any of the one or more

9   functions,

10   designate a second communications device from the plurality of

11   communications devices to perform the one or more

12   functions if any of a set of criteria are satisfied;

13   communicate with the second communications device to indicate

14   that the second communications device has been designated

15   to perform the one or more functions if any of the one or

16   more handoff criteria are satisfied;

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17   select, based upon performance of a plurality of communications channels,

18   a first communications channel from the plurality of

19   communications channels;

20   generate first channel identification data that identifies the first

21   communications channel;

22   provide the first channel identification data to one or more

23   communications devices from the plurality of communications

24   devices; and

25   receive at least a first communication from the one or more communications

26   devices over a second communications channel from the plurality of

27   communications channels, wherein the second communications

28   channel is determined based on the first channel identification data that

29   identifies the first communications channel; and

30   wherein the plurality of communications channels correspond to a set of

31   frequencies and the first communication received from the one or more

32   communications devices is based on a hopping sequence among at least

33   two communications channels of the plurality of communications

34   channels, according to a frequency hopping protocol.

1 29. (Currently Amended) The first communications device ~~as recited in~~ of Claim 28,

2   wherein:

3   communications between the plurality of communications devices are made using a

4   frequency hopping sequence according to a frequency hopping protocol; and

5   the first communications device, the second communications device, and the one or

6   more communications devices are wireless communications devices; and

7   the plurality of communications devices includes a plurality of ~~wireless~~ mobile

8   communications devices.

1 30. (Cancelled)

1 31. (Cancelled)

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1 32. (Currently Amended) The first communications device of Claim 28, wherein the

2 mechanism is further configured to:

3 select, based upon the performance of the plurality of communications channels

4 and at least one performance criterion, a third communications channel

5 from the plurality of communications channels;

6 generate second channel identification data that identifies the third communications

7 channel;

8 provide the second channel identification data <u>over a particular communications</u>

9 <u>channel of the plurality of communications channels</u> to one or more additional

10 communications devices from the plurality of communications devices,

11 <u>wherein the particular communications channel is not the third</u>

12 <u>communications channel</u>; and

13 receive at least a second communication from the one or more additional

14 communications devices over a fourth communications channel from the

15 plurality of communications channels, wherein the fourth communications

16 channel is determined based on the second channel identification data that

17 identifies the third communications channel.

1 33. (Currently Amended) The first communications device of Claim 28, wherein the

2 mechanism is further configured to:

3 provide the channel identification data to the one or more communications

4 devices over a specified communications channel of the plurality of

5 communications channels, wherein the specified communications channel

6 is not the first communications channel;

7 <u>determine the performance of the plurality of communications channels used by</u>

8 <u>the plurality of communications devices; and</u>

9 <u>wherein at least the first communication from the one or more communications</u>

10 <u>devices includes performance data that indicates the performance of the</u>

11 <u>specified communications channel</u>

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1   34.   (Cancelled)

1   35.   (Cancelled)

1   36.   (Currently Amended) The first communications device of Claim ~~35~~ 33, wherein:

2   the performance of the plurality of communications channels is determined based

3   on a channel performance testing technique selected from the group

4   consisting of a received signal strength indicator, a header error check, a

5   cyclic redundancy check, and forward error correction;

6   the first communications device is a master participant;

7   the second communications device is an associate master participant; and

8   the one or more communications devices are slave participants.

1   37.   (Currently Amended) The first communications device of Claim 28, wherein the

2   mechanism is further configured to:

3   classify one or more communications channels of the plurality of communications

4   channels based upon whether the performance of the one or more

5   communications channels satisfies at least one performance criterion; ~~and~~

6   select the first communications channel from the one or more communications

7   channels that are classified as satisfying the at least one performance

8   criterion;

9   determine a number of communications channels of the plurality of

10   communications channels that satisfy the at least one performance

11   criterion; and

12   if the number of communications channels that satisfy the at least one

13   performance criterion is less than a specified number, reclassify one or

14   more communications channels of the plurality of communications

15   channels.

1   38.   (Currently Amended) A computer-readable storage medium carrying one or more

2   sequences of instructions for managing a communications arrangement

3   comprising a plurality of participants, wherein execution of the one or more

4   sequences of instructions by one or more processors causes the one or more

5   processors to perform the steps of:

6   assigning, to a first participant from the plurality of participants, one or more

7   functions to be performed by the first participant;

8   prior to a failure of the first participant that prevents the first participant from

9   performing any of the one or more functions to be performed by the first

10   participant,

11   designating a second participant from the plurality of participants to

12   perform the one or more functions if any of one or more handoff

13   criteria are satisfied;

14   the first participant communicating with the second participant to indicate

15   that the second participant has been designated to perform the one

16   or more functions if any of the one or more handoff criteria are

17   satisfied;

18   in response to any of the one or more handoff criteria being satisfied, assigning

19   the one or more functions to the second participant; and

20   selecting, based upon performance of a plurality of communications channels and

21   at least one performance criterion, a first communications channel from

22   the a plurality of communications channels.

1   39.   (Currently Amended) The computer-readable storage medium of Claim 38,

2   further comprising instructions which, when executed by the one or more

3   processors, cause the one or more processors to carry out the steps of:

4   generating channel identification data that identifies the first communications

5   channel; and

6   providing the channel identification data over the first communications channel to

7   one or more participants from the plurality of participants; and

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8   <u>receiving at least a first communication from the one or more participants over a</u>

9   <u>second communications channel from the plurality of communications</u>

10   <u>channels, wherein the second communications channel is determined</u>

11   <u>based on the channel identification data.</u>

1   40.   (Cancelled)

1   41.   (Currently Amended) A computer-readable <u>storage</u> medium carrying one or more

2   sequences of instructions for managing, based on performance, a communications

3   arrangement comprising a plurality of participants, wherein execution of the one

4   or more sequences of instructions by one or more processors causes the one or

5   more processors to perform the steps of:

6   selecting, based upon performance of a plurality of communications channels, a

7   first communications channel from the plurality of communications

8   channels;

9   generating channel identification data that identifies the first communications

10   channel;

11   providing the channel identification data to a one or more participants from the

12   plurality of participants;

13   receiving at least a first communication from the one or more participants over ~~a~~

14   ~~second~~ <u>the first</u> communications channel from the plurality of

15   communications channels, wherein the ~~second~~ <u>first</u> communications

16   channel is determined based on the channel identification data;

17   assigning, to a first participant from the plurality of participants, one or more

18   functions to be performed by the first participant;

19   prior to a failure of the first participant, designating a second participant from the

20   plurality of participants to perform the one or more functions if any of one

21   or more handoff criteria are satisfied<u>; and</u>

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22   wherein the plurality of communications channels correspond to a set of

23   frequencies and the first communication received from the one or more

24   participants is based on a hopping sequence among at least two

25   communications channels of the plurality of communications channels,

26   according to a frequency hopping protocol..

1   42.   (Currently Amended) A computer-readable storage medium carrying one or more

2   sequences of instructions for assigning functions between participants and

3   selecting communications channels in a communications arrangement comprising

4   a plurality of participants, wherein execution of the one or more sequences of

5   instructions by one or more processors causes the one or more processors to

6   perform the steps of:

7   assigning, to a first participant from the plurality of participants, one or more

8   functions to be performed by the first participant;

9   prior to a failure of the first participant that prevents the first participant from

10   performing any of the one or more functions to be performed by the first

11   participant,

12   designating a second participant from the plurality of participants to

13   perform the one or more functions if any of one or more criteria are

14   satisfied;

15   the first participant communicating with the second participant to indicate

16   that the second participant has been designated to perform the one

17   or more functions if any of the one or more handoff criteria are

18   satisfied;

19   in response to any of the one or more criteria being satisfied, assigning the one or

20   more functions to the second participant;

21   selecting, based upon performance of a plurality of communications channels and

22   at least one specified criterion, a first communications channel from the

23   plurality of communications channels;

24   generating channel identification data that identifies the first communications

25   channel;

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26   providing the channel identification data to a third participant from the plurality of

27   participants; ~~and~~

28   receiving a first communication from the third participant over a second

29   communications channel from the plurality of communications channels,

30   wherein the second communications channel is determined based on the

31   channel identification data that identifies the first communications

32   channel; and

33   wherein the plurality of communications channels correspond to a set of

34   frequencies and the first communication received from the one or more

35   participants is based on a hopping sequence among at least two

36   communications channels of the plurality of communications channels,

37   according to a frequency hopping protocol.

1   43.   (Currently Amended) A computer-readable storage medium carrying one or more

2   sequences of instructions for managing a communications system comprising a

3   plurality of participants, wherein execution of the one or more sequences of

4   instructions by one or more processors causes the one or more processors to

5   perform the steps of:

6   determining the performance of a first communications channel of a plurality of

7   communications channels between a first participant from the plurality of

8   participants and one or more other participants from the plurality of

9   participants; ~~and~~

10   selecting, based upon the performance of the first communications channel

11   between the first participant and the one or more other participants, a

12   second participant from the one or more other participants;

13   sending at least a first communication from the second participant over the first

14   communications channel;

15   assigning, to a third participant from the plurality of participants, one or more

16   functions to be performed by the third participant; ~~and~~

17   designating a fourth participant from the plurality of participants to perform the one or

18   more functions if any of one or more handoff criteria are satisfied; and

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19   wherein the plurality of communications channels correspond to a set of

20   frequencies and the first communication received from the first participant

21   is based on a hopping sequence among at least two communications

22   channels of the plurality of communications channels, according to a

23   frequency hopping protocol.

1   44.   (New) A first communications device comprising:

2   an interface that is configured to receive data from a plurality of communications

3   devices and to transmit data to the plurality of communications devices; and

4   a mechanism that is communicatively coupled to the interface and configured to:

5   perform one or more functions;

6   prior to a failure of the first communications device that prevents the first

7   communications device from performing any of the one or more

8   functions,

9   designating a second communications device from the plurality of

10   communications devices to perform the one or more

11   functions if any of one or more handoff criteria are

12   satisfied;

13   communicate with the second communications device to indicate

14   that the second communications device has been designated

15   to perform the one or more functions if any of the one or

16   more handoff criteria are satisfied;

17   in response to any of the one or more handoff criteria being satisfied,

18   assign the one or more functions to the second communications

19   device; and

20   select, based upon performance of a plurality of communications channels

21   and at least one performance criterion, a first communications

22   channel from a plurality of communications channels.

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1   45.   (New) The first communications device of Claim 44, wherein the mechanism is

2   further configured to:

3   generate channel identification data that identifies the first communications

4   channel;

5   providing the channel identification data over the first communications channel to

6   one or more communications devices from the plurality of

7   communications devices; and

8   receive at least a first communication from the one or more communications

9   devices over a second communications channel from the plurality of

10   communications channels, wherein the second communications channel is

11   determined based on the channel identification data.

1   46.   (New) A first communications device comprising:

2   an interface that is configured to receive data from a plurality of communications

3   devices and to transmit data to the plurality of communications devices; and

4   a mechanism that is communicatively coupled to the interface and configured to:

5   select, based upon performance of a plurality of communications channels,

6   a first communications channel from the plurality of

7   communications channels;

8   generate channel identification data that identifies the first

9   communications channel;

10   provide the channel identification data to one or more communications

11   devices from the plurality of communications devices;

12   receive at least a first communication from the one or more participants

13   over the first communications channel from the plurality of

14   communications channels, wherein the first communications

15   channel is determined based on the channel identification data;

16   assign, to a second communications device from the plurality of

17   communications devices, one or more functions to be performed by

18   the first communications device;

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19   prior to a failure of the first communications device, designate a second

20   communications device from the plurality of communications

21   devices to perform the one or more functions if any of one or more

22   handoff criteria are satisfied; and

23   wherein the plurality of communications channels correspond to a set of

24   frequencies and the first communication received from the one or

25   more participants is based on a hopping sequence among at least

26   two communications channels of the plurality of communications

27   channels, according to a frequency hopping protocol.

1   47.   (New) The first communications device of Claim 46, wherein:

2   the one or more communications devices includes the second communications

3   device; and

4   the second communications device is designated by at least one other communications

5   device that is selected from the group comprising (a) the first communications

6   device, (b) the first communications device and at least one other

7   communications device from the plurality of communications devices, and (c)

8   one or more communications devices from the plurality of communications

9   devices but not including the first communications device.

1   48.   (New) A first communications device comprising:

2   an interface that is configured to receive data from a plurality of communications

3   devices and to transmit data to the plurality of communications devices; and

4   a mechanism that is communicatively coupled to the interface and configured to:

5   determine the performance of a first communications channel of a plurality

6   of communications channels between the first communications

7   device and one or more other communications devices from the

8   plurality of communications devices;

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9   select, based upon the performance of the first communications channel

10   between the first communications device and the one or more other

11   communications devices, a second communications device from

12   the one or more other communications devices;

13   send at least a first communication from the second communications

14   device over the first communications channel;

15   assign, to a third communications device from the plurality of

16   communications devices, one or more functions to be performed by

17   the third communications device;

18   designating a fourth communications device from the plurality of

19   communications devices to perform the one or more functions if

20   any of one or more handoff criteria are satisfied; and

21   wherein the plurality of communications channels correspond to a set of

22   frequencies and the first communication received from the first

23   participant is based on a hopping sequence among at least two

24   communications channels of the plurality of communications

25   channels, according to a frequency hopping protocol.

1   49.   (New) The communications device of Claim 48, wherein the mechanism is

2   further configured to:

3   in response to any of the one or more handoff criteria being satisfied, assigning

4   the one or more functions to the fourth participant;

5   wherein the one or more participants includes the fourth participant; and

6   wherein the first participant is the same participant as the third participant.

1   50.   (New) The communications device of Claim 48, wherein the mechanism

2   designates the fourth participant prior to a condition of the third communications

3   device that prevents the third communications device from performing the one or

4   more functions.

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1 51. (New) The communications device of Claim 48, wherein the mechanism
2   designates the fourth communications device prior to a failure of the third
3   communications device.

4 52. (New) The method of Claim 4, wherein the frequency hopping protocol is
5   selected from the group consisting of (a) a frequency hopping protocol defined by
6   Institute of Electrical and Electronics Engineers 802.15.1 Wireless Personal Area
7   Network Standard, and (b) a frequency hopping protocol that conforms to a
8   Bluetooth communications standard for transmissions over a 2.4 GHz band.

1 53. (New) The first communications device of Claim 28, wherein the mechanism is
2   further configured to:
3   determine the performance of the plurality of communications channels by
4   performing the computer-implemented steps of:
5   sending a request for performance data to at least one participant from the
6   plurality of participants;
7   in response to the request, receiving performance data from the at least one
8   participant; and
9   creating and maintaining performance data that indicates the performance
10   of one or more communications channels of the plurality of
11   communications channels for communications with one or more
12   participants from the plurality of participants.

1 54. (New) The first communications device of Claim 28, wherein:
2   the one or more criteria include the failure of the first communications device;
3   the first communications device is a master communications device,
4   the second communications device is a slave communications device prior to
5   being assigned to perform the one or more functions,
6   the second communications device is an associate master communications device
7   after being designated to perform the one or more functions if any of the
8   one or more criteria are satisfied, and
9   the one or more participants include one or more slave communications devices.

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1   55.   (New) The computer-readable storage medium of Claim 42, wherein:

2   communications between the plurality of participants are made using a frequency

3   hopping sequence according to a frequency hopping protocol;

4   the communications arrangement includes a wireless communications

5   arrangement; and

6   the plurality of participants includes a plurality of mobile devices.

1   56.   (New) The computer-readable storage medium of Claim 42, wherein the channel

2   identification data is first channel identification data, and wherein the computer-

3   readable storage medium further comprises one or more sequences of instructions

4   which, when executed by the one or more processors, causes the one or more

5   processors to perform the steps of:

6   selecting, based upon the performance of the plurality of communications

7   channels and the at least one specified criterion, a third communications

8   channel from the plurality of communications channels;

9   generating second channel identification data that identifies the third

10   communications channel;

11   providing the second channel identification data over a particular communications

12   channel of the plurality of communications channels to one or more

13   additional participants from the plurality of participants, wherein the

14   particular communications channel is not the third communications

15   channel; and

16   receiving at least a second communication from the one or more additional

17   participants over a fourth communications channel from the plurality of

18   communications channels, wherein the fourth communications channel is

19   determined based on the second channel identification data that identifies

20   the third communications channel.

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1   57.   (New) The computer-readable storage medium of Claim 42, wherein the

2   instructions for providing the channel identification data to the one or more

3   participants further comprises one or more sequences of instructions which, when

4   executed by the one or more processors, causes the one or more processors to

5   perform the steps of:

6   providing the channel identification data to the one or more participants over a

7   third communications channel of the plurality of communications

8   channels, wherein the third communications channel is not the first

9   communications channel;

10   determining the performance of the plurality of communications channels used by

11   the plurality of participants; and

12   wherein at least the first communication from the one or more participants

13   includes data that indicates the performance of the third communications

14   channel.

1   58.   (New) The computer-readable storage medium of Claim 57, wherein:

2   the performance of the plurality of communications channels is determined based

3   on a channel performance testing technique selected from the group

4   consisting of a received signal strength indicator, a header error check, a

5   cyclic redundancy check, and forward error correction;

6   the first communications device is a master participant;

7   the second communications device is an associate master participant; and

8   the one or more communications devices are slave participants.

1   59.   (New) The computer-readable storage medium of Claim 42, wherein the

2   instructions for selecting the first communications channel from the plurality of

3   communications channels further comprises one or more sequences of instructions

4   which, when executed by the one or more processors, causes the one or more

5   processors to perform the steps of:

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6   classifying one or more communications channels of the plurality of

7   communications channels based upon whether the performance of the one

8   or more communications channels satisfies at least one performance

9   criterion;

10   selecting the first communications channel from the one or more communications

11   channels that are classified as satisfying the at least one performance

12   criterion; and

13   the method further comprises the computer-implemented steps of:

14   determining a number of communications channels of the plurality of

15   communications channels that satisfy the at least one performance

16   criterion; and

17   if the number of communications channels that satisfy the at least one

18   performance criterion is less than a specified number, reclassifying one or

19   more communications channels of the plurality of communications

20   channels.

1   60.   (New) The computer-readable storage medium of Claim 42, further comprising

2   one or more sequences of instructions which, when executed by the one or more

3   processors, causes the one or more processors to perform the steps of:

4   determining the performance of the plurality of communications channels by

5   performing the computer-implemented steps of:

6   sending a request for performance data to at least one participant from the

7   plurality of participants;

8   in response to the request, receiving performance data from the at least one

9   participant; and

10   creating and maintaining performance data that indicates the performance

11   of one or more communications channels of the plurality of

12   communications channels for communications with one or more

13   participants from the plurality of participants.

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1   61.   (New) The computer-readable storage medium of Claim 42, wherein:

2   the one or more criteria include the failure of the first participant;

3   the first participant is a master participant that performs the steps of selecting,

4   generating, providing, and receiving,

5   the second participant is a slave participant prior to being assigned to perform the

6   one or more functions,

7   the second participant is an associate master participant after being designated to

8   perform the one or more functions if any of the one or more criteria are

9   satisfied, and

10   the one or more participants include one or more slave participants.

1   62.   (New) The computer-readable storage medium of Claim 42, wherein:

2   the one or more participants includes the second participant; and

3   the second participant is designated by at least one other participant that is

4   selected from the group comprising (a) the first participant, (b) the first

5   participant and at least one other participant from the plurality of

6   participants, and (c) one or more participants from the plurality of

7   participants but not including the first participant.

1   63.   (New) The computer-readable storage medium of Claim 41, wherein the

2   frequency hopping protocol is selected from the group consisting of (a) a

3   frequency hopping protocol defined by Institute of Electrical and Electronics

4   Engineers 802.15.1 Wireless Personal Area Network Standard, and (b) a

5   frequency hopping protocol that conforms to a Bluetooth communications

6   standard for transmissions over a 2.4 GHz band.

1   64.   (New) The computer-readable storage medium of Claim 43, further comprising

2   one or more sequences of instructions which, when executed by the one or more

3   processors, causes the one or more processors to perform the steps of:

4   in response to any of the one or more handoff criteria being satisfied, assigning

5   the one or more functions to the fourth participant;

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6   wherein the one or more participants includes the fourth participant; and

7   wherein the first participant is the same participant as the third participant.

1   65.   (New) The computer-readable storage medium of Claim 43, wherein the step of

2   designating the fourth participant is performed prior to a condition of the third

3   participant that prevents the third participant from performing the one or more

4   functions.

1   66.   (New) The computer-readable storage medium of Claim 43, wherein the step of

2   designating the fourth participant is performed prior to a failure of the third

3   participant.

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